UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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JUN 16 2016

Ref: 8EPR-ER

Ms. Ginny Brannon, Director
Colorado Divison of Reclamation and Mine Safety
1313 Sherman Street, Room 215
Denver, Colorado 80203

Mr. Jeff Graves, Director
Inactive Mine Reclamation Program
1313 Sherman Street, Room 215
Denver, Colorado 80203

Re: Illinois Gulch Site, Summit County Colorado

Dear Ms. Brannon and Mr. Graves:

As you are aware, the United States Environmental Protection Agency (EPA), in consultation with the Colorado Division of Reclamation, Mining and Safety (DRMS), is conducting a removal site evaluation for the Illinois Gulch Site in Summit County, Colorado (Site) pursuant to section 104 of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 42 U.S.C. §9604, and section 300.410 of the National Contingency Plan, 40 C.F.R. §300.410. The Site is situated between Little Mountain to the east and Illinois Gulch Road to the west and includes associated mines and workings.

The EPA and DRMS have developed a plan to inject uranine and rhodamine fluorescent dyes into the Puzzle Mine through the Puzzle Extension Shaft. DRMS will mix up the working solutions of the dyes and inject them into the shaft. Once that is accomplished, DRMS will monitor and service automatic samplers for up to 10 days, and document the results, which will be summarized in an after action report. The dyes are expected to discharge from the Puzzle Mine and enter Illinois Creek and potentially flow into the Blue River at visible and detectable levels. Elevated concentrations of dissolved zinc and cadmium are present in Illinois Gulch surface water which are primarily the result of historic mining activity within the Iron Springs Gulch tributary. Illinois Gulch may be contributing to increased adit flow via the Puzzle Extension Shaft which increases adit acid mine discharge in the headwaters of Iron Springs Gulch. Lead and arsenic concentrations exist above residential/industrial screening levels in mine waste deposits and on 'bordering' residential properties (homes with residents living within 200 feet of the mine waste). Iron Springs Gulch flows across the mine waste area causing increased loading into Iron Springs Gulch which then joins Illinois Gulch. Dye tracers mentioned above will be injected in/near Puzzle Willard mine features during a 10 day long tracer event at Illinois Gulch in order to understand mine flow characteristics and thus determine possible next steps regarding current mine discharge. It is not anticipated that this year's activities (tracer studies and sampling) will cause any increase in mine discharge/fluid release (over and above what is already occurring).

The Puzzle Mine dye tracer study is consistent with the EPA's goals in determining the extent of a release or threatened release of hazardous substances from the Puzzle Mine. By this letter EPA confirms that DRMS' implementation of the dye tracer study, as described above, will be at the direction of EPA Federal On-Scene Coordinator Peter D. Stevenson and is consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) as set forth in section 107(d) of CERCLA, 42 U.S.C. §9607(d).

If you have any questions regarding this activity, please contact Peter Stevenson at (303) 312-6799.

Sincerely,

David Ostrander
Director, Emergency Response Program

cc: Peter Stevenson, On-Scene Coordinator
Douglas Naftz, Site Attorney